

PCT0

ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/701,001B

DATE: 03/29/2002 PiS

TIME: 13:51:05

Input Set : A:\Asahilpc.app

Output Set: N:\CRF3\03292002\I701001B.raw

į.

```
3 <110> APPLICANT: ONO, MITSUHARU
 4
        SOKA, TAKAYUKI
 5
         MORIMOTO, IKUO
        MIYAMURA, KOICHI
 8 <120> TITLE OF INVENTION: CELL SEPARATION DEVICE AND SEPARATION METHOD
10 <130> FILE REFERENCE: ASAHI-1-PC-1
12 <140> CURRENT APPLICATION NUMBER: 09/701,001B
13 <141> CURRENT FILING DATE: 2000-11-22
15 <150> PRIOR APPLICATION NUMBER: PCT/JP99/02711
16 <151> PRIOR FILING DATE: 1999-05-24
18 <150> PRIOR APPLICATION NUMBER: JP 159957
19 <151> PRIOR FILING DATE: 1998-05-25
21 <150> PRIOR APPLICATION NUMBER: JP 163023
22 <151> PRIOR FILING DATE: 1998-05-26
24 <160> NUMBER OF SEQ ID NOS: 66
26 <170> SOFTWARE: PatentIn Ver. 2.1
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 5
30 <212> TYPE: PRT
31 <213> ORGANISM: Mus sp.
33 <400> SEQUENCE: 1
34 Asp Tyr Val Ile Asn
35 1
38 <210> SEQ ID NO: 2
39 <211> LENGTH: 17
40 <212> TYPE: PRT
41 <213> ORGANISM: Mus sp.
43 <400> SEQUENCE: 2
44 Glu Ile Tyr Pro Gly Ser Gly Ser Ala Tyr Tyr Asn Glu Met Phe Lys
45 1
47 Gly
50 <210> SEQ ID NO: 3
51 <211> LENGTH: 9
52 <212> TYPE: PRT
53 <213> ORGANISM: Mus sp.
55 <400> SEQUENCE: 3
56 Arg Gly Thr Gly Thr Gly Phe Ala Tyr
57 1
60 <210> SEQ ID NO: 4
61 <211> LENGTH: 15
62 <212> TYPE: PRT
63 <213> ORGANISM: Mus sp.
65 <400> SEQUENCE: 4
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/701,001B

DATE: 03/29/2002 TIME: 13:51:05

Input Set : A:\Asahilpc.app

Output Set: N:\CRF3\03292002\I701001B.raw

66 Lys Ala Ser Gln Ser Val Asp Tyr Asp Gly Asp Ser Tyr Met Asn 10 70 <210> SEQ ID NO: 5 71 <211> LENGTH: 7 72 <212> TYPE: PRT 73 <213> ORGANISM: Mus sp. 75 <400> SEQUENCE: 5 76 Ala Ala Ser Asn Leu Glu Ser 1 80 <210> SEQ ID NO: 6 81 <211> LENGTH: 9 82 <212> TYPE: PRT 83 <213> ORGANISM: Mus sp. 85 <400> SEQUENCE: 6 86 Gln Gln Ser Ser Glu Asp Pro Pro Thr 5 90 <210> SEQ ID NO: 7 91 <211> LENGTH: 330 92 <212> TYPE: DNA 93 <213> ORGANISM: Mus sp. 95 <220> FEATURE: 96 <221> NAME/KEY: CDS 97 <222> LOCATION: (1)..(330) 99 <400> SEQUENCE: 7 100 cct gag ctg gtg aag cct ggg gct tca gtg aag atg tcc tgc aag gct 48 101 Pro Glu Leu Val Lys Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala 102 10 104 tot gga tac aca tto act gac tat gtt ata aac tgg ttg aac cag aga 96 105 Ser Gly Tyr Thr Phe Thr Asp Tyr Val Ile Asn Trp Leu Asn Gln Arg 106 20 25 108 act gga cag ggc ctt gag tgg att gga gag att tat cct gga agt ggt 144 109 Thr Gly Gln Gly Leu Glu Trp Ile Gly Glu Ile Tyr Pro Gly Ser Gly 35 40 112 agt get tae tae aat gag atg tte aag gge aag gee aea etg aet gea 192 113 Ser Ala Tyr Tyr Asn Glu Met Phe Lys Gly Lys Ala Thr Leu Thr Ala 50 55 116 gac aaa too too aac aca goo tac atg cag otc age ago otg aca tot 117 Asp Lys Ser Ser Asn Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser 70 120 gag gac tet geg gte tat tte tgt gea aga ege gga aet ggg aeg ggg 288 121 Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg Arg Gly Thr Gly Thr Gly 122 85 124 ttt gct tac tgg ggc cga ggg act ctg gtc act gtc tct gca 330 125 Phe Ala Tyr Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ala 126 100 105 129 <210> SEQ ID NO: 8 130 <211> LENGTH: 309 131 <212> TYPE: DNA 132 <213> ORGANISM: Mus sp.

RAW SEQUENCE LISTING

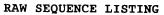
PATENT APPLICATION: US/09/701,001B

DATE: 03/29/2002 TIME: 13:51:05

Input Set : A:\Asahilpc.app

Output Set: N:\CRF3\03292002\1701001B.raw

134 <220> FEATURE:																	
135	5 <22	<221> NAME/KEY: CDS															
136	5 <22	<222> LOCATION: (1)(309)															
138	3 < 40	<pre><400> SEQUENCE: 8 gct tct ttg gct gtg tct cta ggg cag agg gcc acc atc tcc tgc aag 48</pre>															
139	gct	tc1	ttg	gct	. gtg	tct	cta	ggg	caq	agg	qcc	acc	ato	tco	: tac	aaq	48
140) Ala	Se:	Leu	Ala	Val	Ser	Leu	Gly	Gln	Arq	Ála	Thr	Ile	Ser	Cvs	Lys	
141	. 1	-			5			-		10					15		
143	gcc	ago	caa	agt	gtt	gat	tat	gat	ggt	gat	aqt	tat	ato	aac	: taa	tac	96
144	Ala	Sei	Gln	Ser	Val	Asp	Tyr	Asp	ĞÎy	Asp	Ser	Tvr	Met	Asr	Tro	Tyr	,,,
145	<u> </u>			20		_	_	-	25			-4		30		-1-	
147	'caa	cag	, aaa	cca	gga	cag	cca	ccc	aaa	ctc	ctc	ato	tat	act	σса	tcc	144
148	Gln	Glr	Lys	Pro	Gly	Gln	Pro	Pro	Lys	Leu	Leu	Ile	Tyr	Ala	Ala	Ser	
149)		35					40					45				
151	aat	cta	gaa	tct	ggg	ato	cca	gcc	agg	ttt	agt	qqc	agt	aaa	tct	ggg	192
152	Asn	Leu	Glu	Ser	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Ğly	Ser	Glv	Ser	Gly	
153		50					55		,			60		1		1	
155	aca	gac	ttc	acc	ctc	aac	atc	cat	cct	qtq	qaq	gag	gag	gat	act	gca	240
156	Thr	Asp	Phe	Thr	Leu	Asn	Ile	His	Pro	Val	Ğlu	Ğlu	Glu	Asp	Ala	Ala	
157	65					70					75			L		80	
159	acc	tat	tac	tgt	cag	caa	agt	agt	gag	gat	cct	ccq	acq	ttc	aat	ασа	288
160	Thr	Tyr	Tyr	Cys	Gln	Gln	Ser	Ser	Glu	Asp	Pro	Pro	Thr	Phe	Glv	Glv	
161					85					90					95	1	
163	ggc	acc	aag	ctg	gaa	atc	aaa										309
164	Gly	Thr	Lys	Leu	Glu	Ile	Lys										
165				100													
			EQ I														
			ENGT		25												
			YPE:														
171	<21	3> 0	RGAN:	ISM:	Mus	sp.											
			EATU														
174	<22	1> N	AME/I	KEY:	CDS												
175	<222	2> L	OCAT:	ION:	(1)	(9:	L5)										
			EQUE														
178	atg	aaa	tac	ctg	ctg	ccg	acc	gct	gct	gct	ggt	ctg	ctg	ctc	ctc	gcg	48
179	Met	Lys	Tyr	Leu	Leu	Pro	Thr	Ala	Ala	Ala	Gly	Leu	Leu	Leu	Leu	Ala	
T80	1				5					10					15		
182	gcc	cag	ccg	gcc	atg	gcc	gac	att	gtg	ctg	acc	caa	tct	cca	gct	tct	96
183	Ala	Gln	Pro	Ala	Met	Ala	Asp	Ile	Val	Leu	Thr	Gln	Ser	${\tt Pro}$	Ala	Ser	
184				20					25					30			
186	ttg	gct	gtg	tct	cta	ggg	cag	agg	gcc	acc	atc	tcc	tgc	aag	gcc	agc	144
T8/	Leu	Ala	vaı	Ser	Leu	Gly	Gln	Arg	Ala	Thr	Ile	Ser	Cys	Lys	Ala	Ser	
188			35					40					45				
190	caa	agt	gtt	gat	tat	gat	ggt	gat	agt	tat	atg	aac	tgg	tac	caa	cag	192
	~ 7	_										_					
191	Gln	Ser	Val	Asp	Tyr	Asp	Gly	Asp	Ser	Tyr	Met		${\tt Trp}$	Tyr	Gln	Gln	
191	GIn	Ser 50	Val	Asp	Tyr	Asp	Gly 55					60					
191 192 194	aaa	50 cca	yaı gga	Asp	Tyr	Asp	Gly 55 aaa	ctc	ctc	atc	tat	60 act	σca	tcc	aat	cta	240
191 192 194 195	aaa Lys	50 cca	Val	Asp	Tyr	Asp ccc Pro	Gly 55 aaa	ctc	ctc	atc	tat	60 act	σca	tcc	aat	cta	240
191 192 194 195 196	aaa Lys 65	50 cca Pro	Val gga Gly	Asp cag Gln	Tyr cca Pro	Asp ccc Pro 70	Gly 55 aaa Lys	ctc Leu	ctc Leu	atc Ile	tat Tyr 75	60 gct Ala	gca Ala	tcc Ser	aat Asn	cta Leu 80	240
191 192 194 195 196	aaa Lys 65	50 cca Pro	yaı gga	Asp cag Gln	Tyr cca Pro	Asp ccc Pro 70	Gly 55 aaa Lys	ctc Leu	ctc Leu	atc Ile	tat Tyr 75	60 gct Ala	gca Ala	tcc Ser	aat Asn	cta Leu 80	240

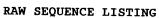


DATE: 03/29/2002 PATENT APPLICATION: US/09/701,001B TIME: 13:51:05

Input Set : A:\Asahilpc.app

Output Set: N:\CRF3\03292002\1701001B.raw

199 200		Ser	Gly	Ile	Pro 85	Ala	Arg	Phe	Ser	Gly 90	Ser	Gly	Ser	Gly	Thr 95	Asp	
202	ttc	acc	ctc	aac	atc	cat	cct	gtg	gag	gag	gag	gat	gct	qca		tat	336
203	Phe	Thr	Leu	Asn	Ile	His	Pro	Val	Glu	Glu	Glu	Asp	Ăla	Ăla	Thr	Tyr	
204				100					105					110			
206	tac	tgt	cag	caa	agt	agt	gag	gat	cct	ccg	acg	ttc	ggt	gga	ggc	acc	384
		Cys	Gln	Gln	Ser	Ser	Glu			Pro	Thr	Phe	Gly	Gly	Gly	Thr	
208			115					120					125				
210	aag	ctg	gaa	atc	aaa -	ggt	gga	ggc	ggt	tca	ggc	gga	ggt	ggc	tcc	gga	432
			Glu	TTE	Lys	GTA		Gly	Gly	Ser	Gly		Gly	Gly	Ser	Gly	
212		130	~~~	+			135					140					
214	991	Clar	gga	Com	cag	gtt	cag	ctg	cag	cag	tct	gga	cct	gag	ctg	gtg	480
	145	GIY	Gly	ser	GIII	150	GIII	Leu	GIN	GIN		GTA	Pro	GLu	Leu		
		cct	ggg	aat	tas		224	2+4	+ 00	+ ~ ~	155	~~+	+~+	~~~	.	160	F20
219	Lvs	Pro	Gly	Δla	Ser	Val	Luc	Mot	Cor	Cvc	Two	yct 111	Cor	gga	Lac	aca	528
220	270		OLY	11IU	165	Val	цуз	Mec	Set	170	гур	нта	ser	GIA	175	THE	
	ttc	act	gac	tat		ata	aac	taa	ttα		cag	aga	act	aas		aaa	576
223	Phe	Thr	Asp	Tvr	Val	Ile	Asn	Trn	Len	Agn	Gln	Ara	Thr	Glv	Cln	Glv	370
224				180					185	****	0111	1119	1111	190	GIII	Gry	
226	ctt	gag	tgg	att	gga	gag	att	tat	cct	qqa	agt	aat	agt		tac	tac	624
227	Leu	Glu	Trp	Ile	бĺу	Ğlu	Ile	Tyr	Pro	Gly	Ser	Gly	Ser	Ala	Tvr	Tvr	021
228			195		_			200		-		_	205			- 4 -	
230	aat	gag	atg	ttc	aag	ggc	aag	gcc	aca	ctg	act	gca	gac	aaa	tcc	tcc	672
231	Asn	Glu	Met	Phe	Lys	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	
232		210					215					220					
234	aac	aca	gcc	tac	atg	cag	ctc	agc	agc	ctg	aca	tct	gag	gac	tct	gcg	720
235	Asn	Thr	Ala	Tyr	Met		Leu	Ser	Ser	Leu		Ser	Glu	Asp	Ser	Ala	
	225					230					235					240	
238	gtc	tat	ttc	tgt	gca	aga	cgc	gga	act	ggg	acg	ggg	ttt	gct	tac	tgg	768
240	val	Tyr	Phe	Cys		Arg	Arg	GLY	Thr		Thr	Gly	Phe	Ala		Trp	
	aaa	aa.	aaa	20+	245	a+ a	- a+	~+~		250					255		
242	Glv	Δra	ggg Gly	Thr	Len	y LC	Thr	y LC	Cor	gca	gcg	gcc	gca	gac	tac	aag	816
244	OLY.	my	GLY	260	neu	Val	1111	vaı	265	нта	Ата	Ата	Ald	270	Tyr	ьys	
	gat	gac	gat		aaa	aac	tca	age		cad	аап	cta	atc		maa	T 2 T	864
247	Asp	Asp	Asp	Asp	Lvs	Glv	Ser	Ser	Glu	Gln	Lvs	Len	Tle	Ser	Glu	Glu	004
248	-	•	275		-1-	1		280	014	4	-,5	LCu	285	DCI	OLU	GIU	
250	gat	ctg	ggc	tcg	agg	tcq	acc		cat	cat	cat	cac		aaa	t.ca	acc	912
251	Asp	Leu	Gly	Ser	Arg	Ser	Thr	His	His	His	His	His	His	Glv	Ser	Thr	
252		290					295					300		-			
		tgat	aago	tt													925
255																	
256																	
			Q ID														
			NGTH		5												
			PE:		M												
264	<213	> UK > □□	GANI ATUR	SM:	Mus	sp.											
2 04	\ ZZU	/ rE	MIUK	.c.:													



PATENT APPLICATION: US/09/701,001B

DATE: 03/29/2002 TIME: 13:51:05

Input Set : A:\Asahilpc.app

Output Set: N:\CRF3\03292002\1701001B.raw

			NAME,				915)										
			SEQUE				,										
						cco	acc	get	. act	act	. aat	cto	r ctc	r ctr	cto	gcg	48
270) Met	Lys	Tyr	Leu	Leu	Pro	Thr	Ala	ı Ala	Ala	Glv	. Lei	, ce	, CCC I Lei	I Len	Ala	40
271	1 3	L			5	;				10					15		
273	gco	cag	j deg	geo	atq	qcc	caq	att	cao			r dad	r tot	. aas	. cct	gag	96
274	Ala	Glr	Pro	Āla	Met	Ála	Gln	Val	Gln	Leu	Glr	Gln	Ser	. 990	Dro	Glu	30
275	5			20)				25			. 011		30		GIU	
277	cto	gtg	, aag	cct	ggg	gct	tca	ata	aaq	ato	t.co	: tac	. aao			gga	144
278	Let	ı Val	. Lys	Pro	Gly	Āla	Ser	. Val	Lys	Met	Ser	Cvs	Lvs	Ala	Ser	Gly	744
279)		35		-			40					45		DCI	GLY	
281	tac	aca	tto	act	gac	tat	gtt	ata	aac	taa	tta	aac			act	gga	192
282	Tyr	Thr	Phe	Thr	Asp	Tyr	Val	Ile	Asn	Trp	Leu	Asn	Gln	Aro	Thr	Gly	172
283		50	+		_	-	55					60		9	1111	GLY	
285	cag	ggc	ctt	gag	tgg	att	qqa	gag	att	tat	cct	. ααа	aαt	aat	aαt	act	240
286	Gln	Gly	Leu	Glu	Trp	Ile	Ğĺy	Glu	Ile	Tyr	Pro	Glv	Ser	Glv	Ser	Ala	240
287	65					70	_			1 -	75		001	011	DCI	80	
289	tac	tac	aat	gag	atg	ttc	aag	qqc	aag	qcc	aca	cta	act	αca	gac	aaa	288
290	Tyr	Tyr	Asn	Glu	Met	Phe	Lys	Gly	Lys	Ãla	Thr	Leu	Thr	Ala	Asp	Lvs	200
291					85					90					95		
293	tcc	tcc	aac	aca	gcc	tac	atg	cag	ctc	agc	agc	ctq	aca	tct	σασ	σac	336
294	Ser	Ser	Asn	Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	
295				100					105					110		_	
297	tct	gcg	gtc	tat	ttc	tgt	gca	aga	cgc	gga	act	ggg	acg	ggg	ttt	qct	384
298	Ser	Ala	Val	${ t Tyr}$	Phe	Cys	Ala	Arg	Arg	Gly	Thr	Gly	Thr	Gly	Phe	Ála	
299			115					120					125				
301	tac	tgg	ggc	cga	ggg	act	ctg	gtc	act	gtc	tct	gca	ggt	gga	ggc	ggt	432
302	Tyr	Trp	Gly	Arg	Gly	Thr	Leu	Val	Thr	Val	Ser	Ala	Gly	Gly	Gly	Gly	
303		130					135					140					
305	tca	ggc	gga	ggt	ggc	tcc	gga	ggt	ggc	gga	tcg	gac	att	gtg	ctg	acc	480
306	ser	GLY	GLY	GLy	Gly	Ser	Gly	Gly	Gly	Gly		Asp	Ile	Val	Leu	Thr	
	145					150					155					160	
309	caa	tct	cca	gct	tct	ttg	gct	gtg	tct	cta	ggg	cag	agg	gcc	acc	atc	528
311	GIN	ser	Pro	Ala	Ser	Leu	Ala	Val	Ser		Gly	Gln	Arg	Ala	\mathtt{Thr}	Ile	
311	+	.			165					170					175		
211	Com	cgc	aag	gcc	agc	caa	agt	gtt	gat	tat	gat	ggt	gat	agt	tat	atg	576
315	ser	Cys	ьуs	Ala	ser	GIn	Ser	Val	Asp	\mathtt{Tyr}	Asp	Gly	Asp	Ser	Tyr	Met	
	220	+ ~ ~	+	180					185					190			
312	λan	Trn	LdC mrrr	Caa	cag	aaa	cca	gga	cag	cca -	CCC	aaa	ctc	ctc	atc	tat	624
319	ASII	пр	195	GIII	GIII	rys	Pro		Gln	Pro	Pro	Lys		Leu	Ile	Tyr	
	act	aca		22+	a+ a	~~~		200					205				
322	Δla	ηca	Cor	aat Aan	Tou	yaa ci	CCC	ggg	atc	cca	gcc	agg	ttt	agt	ggc	agt	672
323	пта	210	per	ASII	Leu	GIU	ser	СТА	Ile	Pro	Ala		Phe	Ser	Gly	Ser	
	aaa		aaa	aca	na n	t+a	215	at a		- + -	~~±	220					
326	Glv	Ser	333 333	uca Thr	yac Aen	Dha	acc Th∽	LON	aac Asn	alc T1-	cat	CCT	gtg	gag	gag	gag	720
327	225		~+ <u>1</u>	* 117	nap	230	T 11T	ьец	ASII	тте	ніs 235	LI.O	val	GIU	GLu		
		act	αca	acc	tat		ta+	C2.7	caa	3 a+	∠33 2a±	~ ~ ~	t-			240	
-	J C	, , ,	904		LuL	cuc	LyL	cay	Caa	ayı	ayı	yag	yat	CCT	ccg	acg	768



Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.





VERIFICATION SUMMARY

PATENT APPLICATION: US/09/701,001B

DATE: 03/29/2002 TIME: 13:51:06

Input Set : A:\Asahilpc.app

Output Set: N:\CRF3\03292002\I701001B.raw

L:404 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:432 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15